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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,219	06/08/2007	Jean Armioli	DKT03189	7653
67424 7590 03/30/2010 REISING, ETHINGTON, BARNES, KISSELLE, P.C. P. O. BOX 4390 TROY, MI 48099-4390				
EXAMINER TIEFEN, MARINA ANNETTE				
ART UNIT		PAPER NUMBER		
3753				
MAIL DATE		DELIVERY MODE		
03/30/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/583,219

Applicant(s)

ARMIROLI ET AL.

Examiner

MARINA TIETJEN

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 February 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17, 18, 20-28, 30, 31 and 33-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17, 18, 20-28, 30, 31, 37 and 38 is/are allowed.
- 6) ☒ Claim(s) 33-36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 August 2009 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Drafts/Person's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02/24/2010 has been entered.

Election/Restrictions

2. Claims 17-18, 20-28, 30-31, and 37-38 are allowable. The restriction requirement between species A (fig. 1), B (fig. 2), and C (fig. 3), as set forth in the Office action mailed on 02/26/2009, has been reconsidered in view of the allowability of claims to the elected invention pursuant to MPEP § 821.04(a). **The restriction requirement is hereby withdrawn as to any claim that requires all the limitations of an allowable claim.** Claim 21-23, directed to species B and C are no longer withdrawn from consideration because the claim(s) requires all the limitations of an allowable claim.

In view of the above noted withdrawal of the restriction requirement, applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Once a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guglielmi et al. (U.S. Pat. No. 4,592,533) in view of Rado (U.S. Pub. 11o. 2004/0074985).

Guglielmi et al. disclose a valve (fig. 3) comprising:

a valve body (1, 6) defining an inlet (2), an outlet (3), and a seat (rim around opening 8);

a first valve member (34) moveable between a first valve member closed position (against seat) and a first valve member open position (away from seat), wherein at least a portion of the first valve member (34) is in contact with the seat (8) when the first valve member is in the first valve member closed position, and the at least a portion of the first valve member (34) is spaced a predetermined distance from the seat (8) when the first valve member is in the first valve member open position;

an actuator (24, 28) for receiving a voltage, wherein at least a portion (28) of the actuator (24, 28) is moveable relative to the valve body (1, 6),

wherein the first valve member (34) is further defined by an axial cavity (38) in fluid communication with the inlet (2), the valve body (1, 6) is further defined by a low pressure chamber portion (35) and a high pressure chamber portion (10, 38), the high pressure chamber (10, 38) being formed in part by the axial cavity (38), the first valve member (34), when in the first valve member closed position, defines a boundary between the low pressure chamber (35) and the high pressure chamber (10, 38), and wherein the low pressure chamber (35) is in fluid communication with the high pressure chamber (10, 38) when the first valve member (34) is in the first valve member open position; and

a restriction part (37) located in the high pressure chamber (10, 38) and having a restriction passageway (opening through 37) which allows the passage of fluid from one

side of the restriction part to another side of the restriction part, both sides of the restriction passageway being located in the high pressure chamber (10, 38).

However, Yang does not disclose the actuator is a piezoelectric portion, and wherein the piezoelectric portion is a disc having a first surface, and wherein at least a portion of the first surface is selectively deformed when a voltage is applied as the first valve member moves relative to the valve body.

Rado teaches a valve needle actuator (20b), wherein the actuator is a piezoelectric portion (50, fig. 2) wherein the piezoelectric portion (50) is a disc (para. 0026); wherein at least a portion of the first surface is selectively deformed by applying a voltage as the first valve member (70) moves relative to the valve body (22b), for the purpose of providing a needle actuator which is simple, inexpensive, and accurate (para. 008).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Guglielmi's valve such that the actuator is a piezoelectric portion, and wherein the piezoelectric portion is a disc having a first surface, and wherein at least a portion of the first surface is selectively deformed when a voltage is applied as the first valve member moves relative to the valve body, as taught by Rado, for the purpose of providing a needle actuator which is simple, inexpensive, and accurate.

Allowable Subject Matter

6. Claims 17-18, 20-28, 30-31, and 37-38 are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARINA TIETJEN whose telephone number is (571) 270-5422. The examiner can normally be reached on Mon-Thurs, 9:30AM-5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROBIN EVANS can be reached on (571) 272-4777. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. T./
Examiner, Art Unit 3753

/John K. Fristoe Jr./
Primary Examiner, Art Unit 3753